i2 summit 2011
innovation in intervention
ACC in partnership with CRF

E1992
JACC April 5, 2011
Volume 57, Issue 14

i2 SUMMIT

SAFETY COMPARISON OF TWO VASCULAR CLOSURE DEVICES IN CONTEMPORARY INVASIVE CARDIOLOGY PRACTICE: MYNX VERSUS ANGIO-SEAL

i2 Poster Contributions
Ernest N. Morial Convention Center, Hall F
Tuesday, April 05, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Vascular Access, Closure Devices, Complications
Abstract Category: 24. Vascular Access, Closure Devices and Complications
Session-Poster Board Number: 2518-543

Authors: *Andrew M. Weinberg, Zafar Iqbal, Marc Cohen, Najam Wasty, Newark Beth Israel Medical Center, Newark, NJ*

Background: Both Angio-SealTM and MynxTM are widely used vascular closure devices (VCDs) in the cardiac catheterization laboratory. However, their comparative safety has not been established in any large scale study.

Methods: We conducted a cohort analysis, using ICD-9 coding data from the Premier Perspective Database, of 84,675 patients who received VCD (10.2% Mynx, 89.8% Angio-Seal) from January 2008 to December 2009. Diagnostic and interventional procedures were analyzed separately. Primary endpoints consisted of procedure-related bleeding/hematoma, blood transfusion, vessel closure, arteriovenous fistula and pseudoaneurysm. The independent effect of closure device on the prespecified outcomes was examined using multivariate logistic regression analyses (MVA). Covariates in the MVA model were age, gender, hypertension, diabetes, hyperlipidemia, chronic kidney disease, cerebrovascular disease, peripheral vascular disease, smoking, low body weight and concomitant antiplatelet/anticoagulant therapy. Propensity score matched analysis was also used to compare endpoints between the two groups.

Results: Of the vascular complications, bleeding and transfusion were found to be different between the groups Table 1.

Table 1. Results		Odds Ratio Angio-Seal vs. Mynx (95% CI)		P Value	
MVA Diagnostic (Multivariate Analysis)	Bleeding	1.14 (0.93-1.40)		0.21	
	Transfusion	0.59 (0.50-0.70)		<0.0001	
MVA Intervention	Bleeding	0.74 (0.59-0.92)		<0.0075	
	Transfusion	0.40 (0.29-0.55)		<0.0001	
		Mynx	Angio-Seal		
PSM Diagnostic (Propensity Score Matched)	Bleeding	1.7% (69/4009)	2.0% (158/8018)	0.34	
	Transfusion	3.1% (123/4009)	1.6% (129/8018)	<0.001	
PSM Intervention	Bleeding	3.3% (91/2780)	2.5% (209/8340)	0.03	
	Transfusion	1.7% (46/2780)	0.7% (58/8340)	<0.001	

Conclusions: Use of Angio-Seal was associated with lower bleeding in the intervention subgroup while having lower transfusion rates in both diagnostic and intervention subgroups. This finding may reflect learning curve associated with a relatively new VCD, Mynx.